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## COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS.

U. S. DEPARTMENT OF AGRICULTURE  
AND STATE AGRICULTURAL COLLEGES  
COOPERATING.

OFFICE OF FARMERS' COOPERATIVE DEMONSTRATIONS, NORTHERN AND WESTERN STATES,  
WASHINGTON, D. C.

### CANNING WINDFALL AND CULL APPLES AND USE OF BY-PRODUCTS.

To be able to transform the windfall and cull apples into a valuable and palatable food product, available for home consumption throughout the entire year as well as for the commercial market, is a great advantage worth the consideration of all apple growers. This circular does not discuss the use of such apples for making apple sauce, cider, cider vinegar, apple jelly, apple preserves, apple butters, and similar products, but deals with some new recipes for using windfalls and culls profitably; as, canning the apples whole, sliced for pie filling, and quartered for fruit salads; the sterilization of cider so as to keep it sweet and unfermented throughout the year; and a method for making apple sirup. The recipe for this sirup was furnished by Mr. H. C. Gore, of the Bureau of Chemistry.

The windfall and cull apples may be divided into two grades. The first grade would include the whole, reasonably sound, fruit; the second grade, the worm-eaten, partially decayed, and injured fruit. Do not can any injured or decayed part nor allow apples to become overripe before canning.

#### RECIPE FOR CANNING WHOLE, REASONABLY FIRM, APPLES.

Wash apples. Remove core and blemishes. Place whole apples in blanching tray or blanching cloth, and blanch in boiling hot water for two minutes. Remove and plunge quickly into cold water. Pack in large, empty glass jars or gallon tin cans. Pour over the product a hot thin sirup of about 18° density. Place rubber and top in position. Seal partially, not tight. (If using tin cans, cap and tip completely.) Process half-gallon or gallon containers 20 minutes in boiling hot water, in homemade or hot-water bath outfit; 15 minutes in water-seal; 10 minutes in steam-pressure outfit, with 5 pounds of steam pressure; 5 minutes in aluminum pressure-cooker outfit, under 15 pounds of steam pressure. Remove jars, tighten covers, invert to cool, and test joints. Wrap in paper, and store. The time of heating will have to be varied according to ripeness and condition of the fruit. Use just enough time to sterilize perfectly, and yet not enough to change the color or reduce the pulp to sauce.

Firm and tart apples may be cored and peeled first, then canned by the above recipe.

#### USES FOR CANNED APPLES.

- (1) Breakfast dish, with cream and sugar added.
- (2) Baked, like fresh apples for breakfast or for other meals.
- (3) Apple salad, often served for lunch or supper.
- (4) A relish with roast pork. The apples may be fried in the pork fat or the cores may be cooked with roast pork for flavoring.
- (5) Apple dumplings, deep apple pie, and other desserts in which whole apples are desirable.
- (6) The sirup of canned whole apples can be used for pudding sauces or fruit drinks.



### RECIPE FOR CANNING APPLES FOR PIE FILLING.

Use second grade of windfalls or culls. Wash, core, pare, and remove all decayed or injured spots. Slice apple quickly into a basin containing slightly salted cold water (about 1 teaspoonful per gallon), to keep from discoloring. Pack fresh cold product in glass jars or tin cans. Add one cupful of hot, thin sirup of about 18° density to each quart of fruit. If using glass cans, put on the rubbers, and screw on the tops, but do not seal completely. If using tin cans, cap and tip, sealing up completely. Sterilize 12 minutes in hot-water bath, homemade outfit; 10 minutes in water-seal outfit; 6 minutes under 5 pounds of steam pressure; 4 minutes in aluminum pressure cooker. Remove jars, tighten covers, invert to cool, and test joint. Wrap in paper, and store.

NOTE.—This filling can be used for making apple pies in the same way that fresh apples would be used, with the exception that the sirup must be poured off, and less sugar should be used. Since the apples have already been cooked, only enough heat is needed to cook the crust and to warm the apples through. Pies may be baked in 7 minutes. The apple pies made with these apples are, in the opinion of many housekeepers, as good as those made with fresh fruit, and they can be made in less time and are less expensive.

### RECIPE FOR CANNING QUARTERED APPLES FOR FRUIT SALADS.

Select best grade of culls of firm and rather tart varieties. Core, pare, and quarter. Drop into a basin containing slightly salted cold water. Pack these quartered pieces tightly in jar or tin container. Add a teacupful of thin, hot sirup to each quart. Place rubber and top in position, partially seal, not tight. Cap and tip completely tin cans. Sterilize 12 minutes in hot-water bath, homemade outfit; 10 minutes in water-seal outfit; 6 minutes under 5 pounds of steam pressure; 4 minutes in aluminum pressure cooker. Remove jars, tighten covers, invert to cool, and test joint. Wrap in paper, and store.

### KEEPING APPLE CIDER SWEET BY THE HOME-CANNING METHOD.

Fill fruit jars with the fresh apple cider. Add a tablespoonful of sugar to each quart. Place rubber and cap in position, partially tighten, or cap and tip the tin cans. Sterilize in hot-water bath outfit for 10 minutes; in water-seal outfit for 8 minutes; in the steam-pressure outfit, under 5 pounds of steam, for 4 minutes; in the aluminum pressure cooker for 2 minutes. Remove jars, tighten cover, invert to cool, and test joint.

NOTE.—If you desire the apple cider to be a little tart or slightly fermented, it will be necessary to let it stand for two or three days before you sterilize, and then add about two minutes of time to each schedule given in the recipe.

### REDUCING SWEET APPLE CIDER TO SIRUP.

It may not be practical for the average fruit farmer to make apple sirup as a commercial proposition, but during seasons when there are a large number of culls and windfalls, when markets are glutted, and no profitable market for apples, it is a matter of business economy to utilize by-products and the making of apple sirup for the family's winter use is quite worth while.

NOTE.—Wash apples, remove all decayed and worm-eaten spots, and press out juice as usual for cider making. Be sure the juice does not ferment or "work" as only sweet cider should be used for sirup making. The sterilizing, reducing vat, or kettle, should be a third larger than required to hold contents.

### RECIPE FOR APPLE SIRUP.

Add 5 ounces of powdered calcium carbonate to 14 gallons of apple cider. Powdered calcium carbonate (carbonate of lime), or, to give it its common name, precipitated chalk, is a low-priced, harmless chemical available at any drug store. Boil in kettle or vat vigorously for a period of five minutes. Pour the liquid into vessels, preferably glass jars or pitchers, allow to stand six to eight hours, or until perfectly clear. Pour the clear liquid into preserving kettle. Do not allow sediment at bottom to enter. Add to the clear liquid one level teaspoonful of lime carbonate and stir thoroughly. The process is completed by boiling down rapidly to a clear liquid. Use density gauge or candy thermometer and bring it up to 220° F., or, without thermometer, reduce bulk to one-seventh of original volume. To see whether it is cooked enough, test as you would sirup or candy, by pouring a little of it into cold water. If boiled enough, it should have the consistency of maple sugar. It should not be cooked long enough to harden like candy when tested. When the test shows that the sirup has been cooked enough, pour it into fruit jars, pitchers, etc., and allow it to cool slowly. Slow cooling is important, as otherwise the suspended matter will not settle properly and the sirup will be cloudy. A good way to insure slow cooling is to stand the vessels full of sirup in a bucket or a wash boiler of hot water. They may also be placed in a fireless cooker. The white sediment which settles out during cooling is called "malate of lime" and is a harmless compound of lime with the natural acid of the apple. When the sirup is cooled, it should be stored in fruit jars or bottles. Place the rubber cap or cork in position and tighten. Then place the bottles or cans of sirup in hot water and sterilize for 12 minutes in hot-water or wash-boiler outfit, 10 minutes in water-seal outfit, 8 minutes in steam-pressure outfit under 5 pounds of steam, or 5 minutes in aluminum pressure cooker under 15 pounds of pressure.

Apple sirup made by this method is a very palatable and high-grade product. It has a flavor much like the thick sirup or jelly which is so often formed when apples are baked with a little sugar. As shown by experiments made by the Government experts, this apple sirup can be used in cooking with good results, as well as for table purposes.

The recipes given herewith show the time requirements for the four different types of canning outfits, but this does not mean that the fruit or cider must be subjected to all four processes in four different types of outfits. Only one should be used. The four time requirements are given so that the one using the recipes will have complete instructions to follow, regardless of the type of outfit available for the work.

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